



# **CHANGE IMPERATIVE**

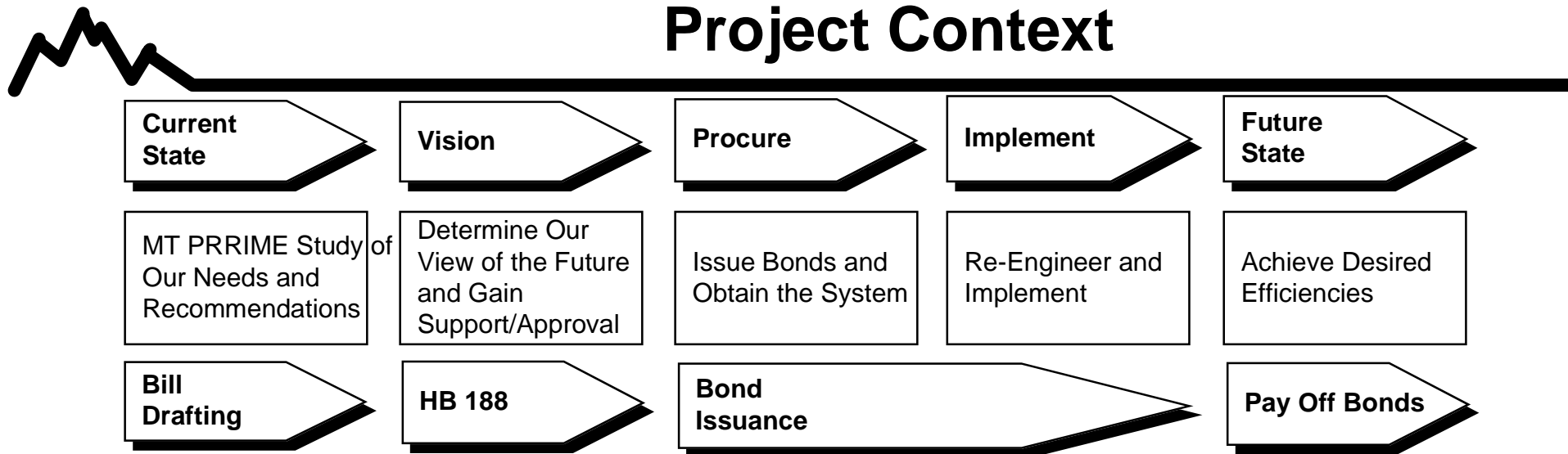
## **Purchase to Payment Process Vision**



## Table of Contents

- Project Context
- Project Objectives
- Project Scope
- Project Approach
- Situation Assessment
- What are the Issues?
- Benchmark Findings
- Opportunity Analysis
- Conclusions

## Project Context



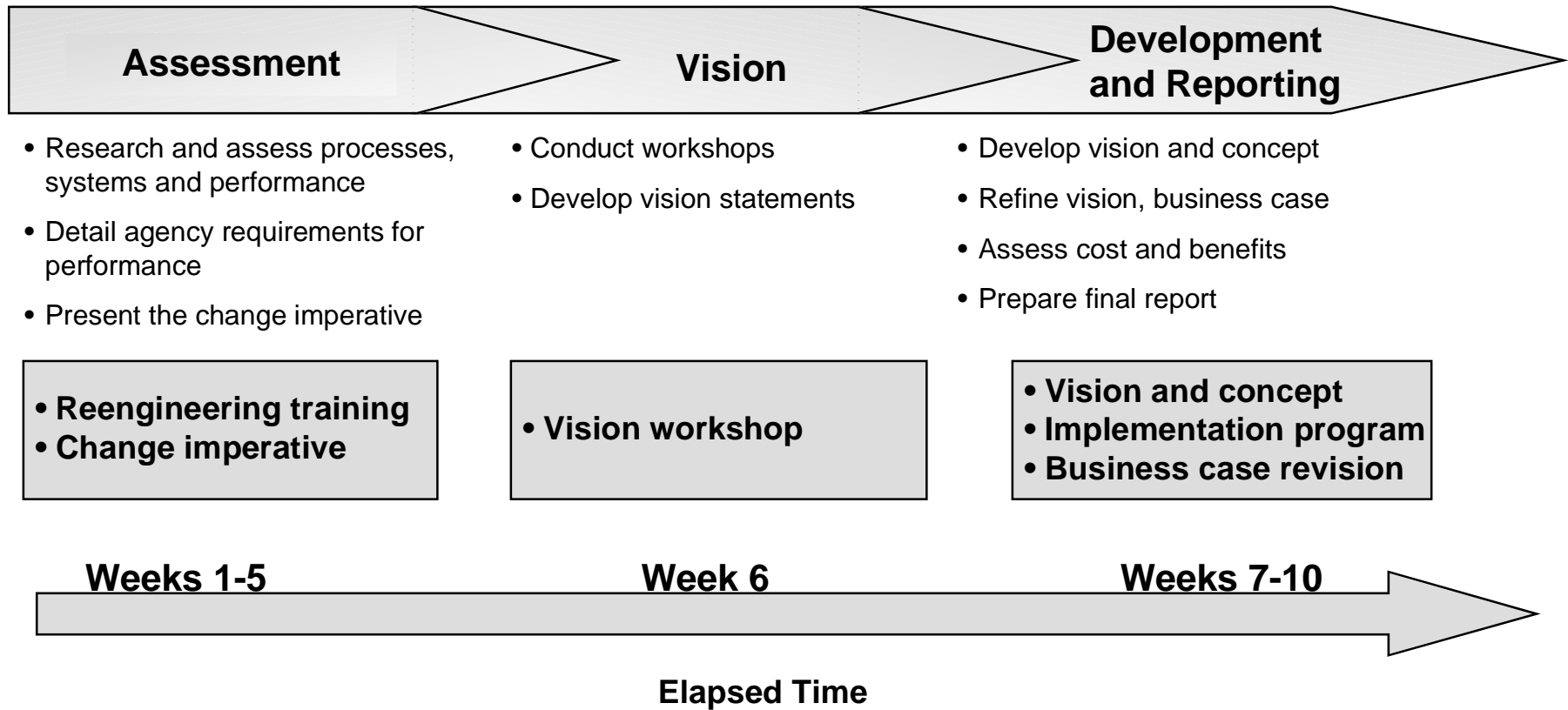
- State of Montana operates mainframe-based financial, human resource and asset management applications built 20-25 years ago that are not Year 2000 compliant.
- Current system is failing to meet the needs of State agencies.
- Senate Joint Resolution 23 is the Legislature's decision to re-engineer Montana's information management environment.
- MT PRRIME undertaken to analyze the State's information management environment.
- This phase of MT PRRIME is being undertaken to refine the business case to replace core systems with a third-party, off-the-shelf software solution.

**The intent of this phase is to establish an imperative to change based on cost savings from the budgeting, payroll, and accounts payable and purchasing processes.**



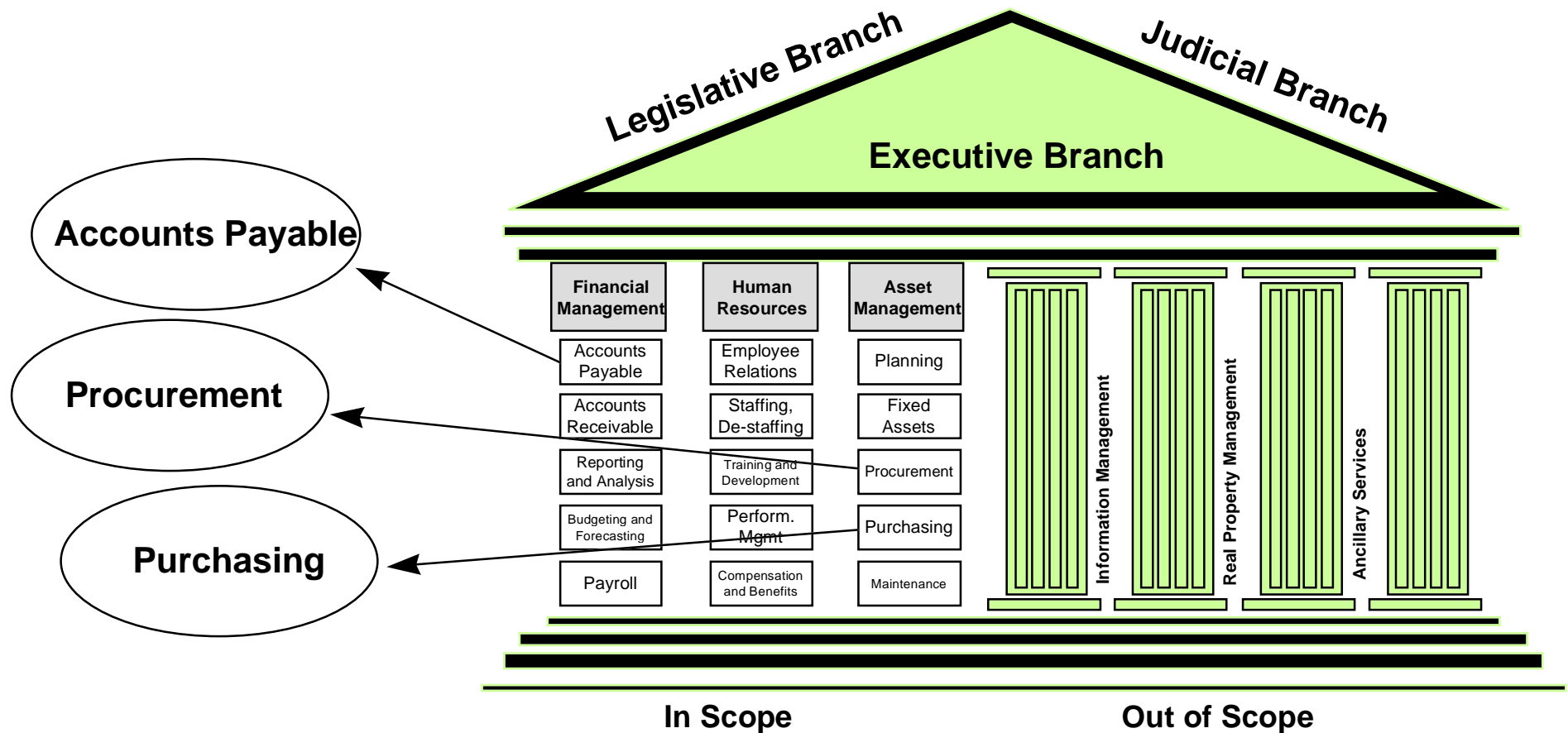
# Project Objectives

- Assess the current Purchasing and Accounts Payable Processes;
- Establish the Change Imperative for these processes; and
- Define and develop the concept for new processes at a level of detail sufficient to guide system selection.



# Project Scope

Purchasing and Accounts Payable relating to all goods and services will be covered excluding the management of fixed assets and inventories.

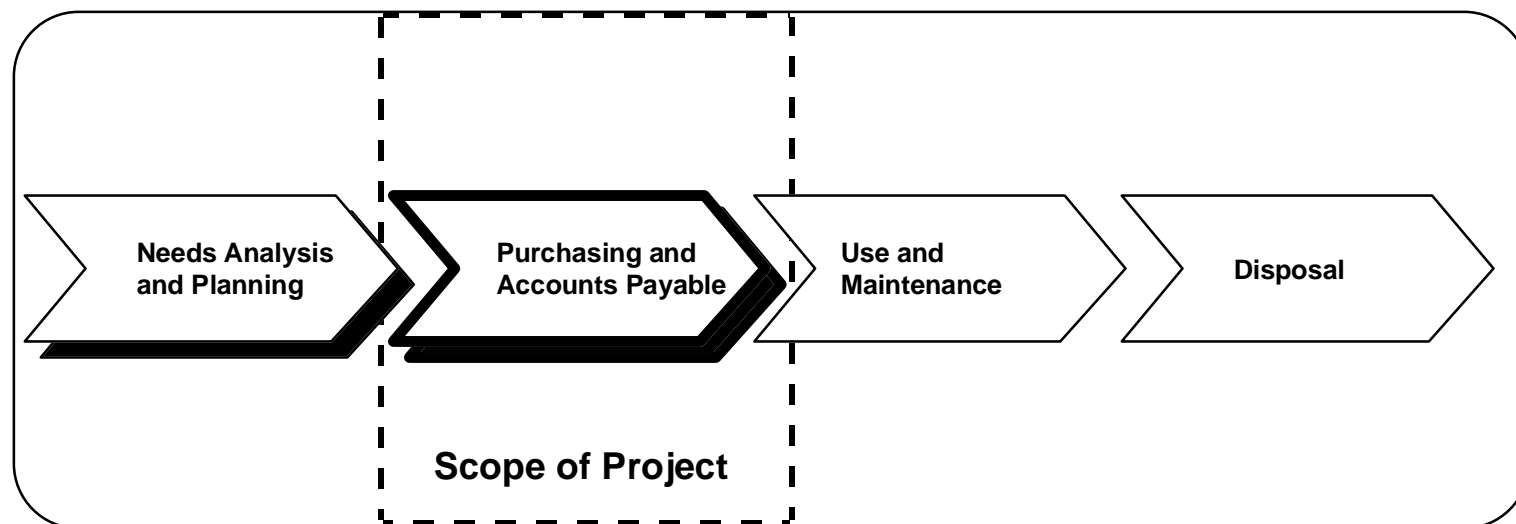




# Project Scope

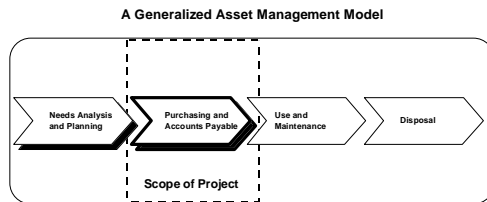
The focus of this project is on the Purchasing and Accounts Payable activities of Asset Management.

## A Generalized Asset Management Model



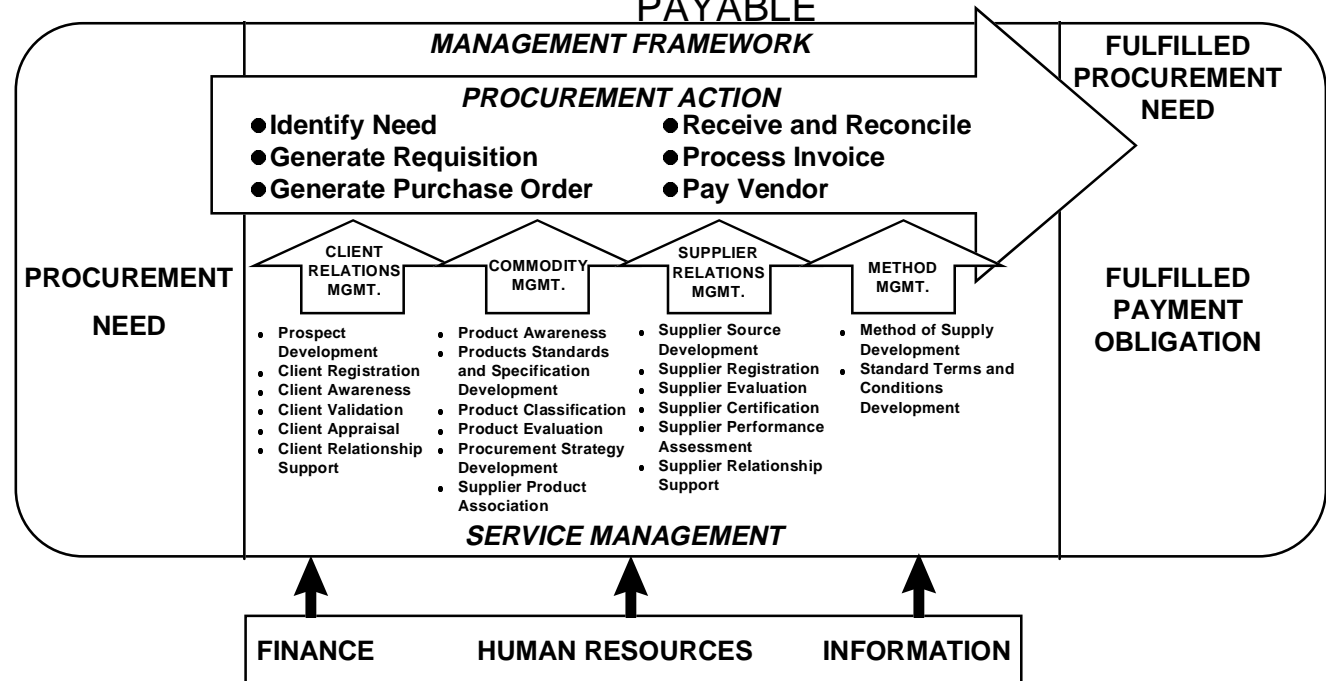
**The Asset Management Model includes the acquisition and management of fixed assets, however, fixed assets and the PAM system are not in scope.**

# Project Scope



The Purchasing and Accounts Payable activities of the Asset Management Model are detailed in the Business Process Detail below.

## BUSINESS PROCESS DETAIL--PURCHASING AND ACCOUNTS PAYABLE



**Finance, Human Resources and Information Management cut across the entire organization, and provide support for Purchase to Payment process.**



# Project Approach

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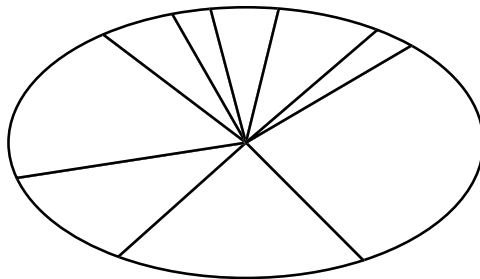
- Interviewed more than 30 State employees in 10 State agencies, which represents 69% of the State budget;
- Agencies interviewed varied in size;
- Estimated Purchasing transaction volumes and the number of Full-Time Equivalent employees;
- Estimated Accounts Payable transaction volumes and the number of Full-Time Equivalent employees;
- Calculated the agencies' performance in each process area;
- Developed a qualitative assessment based on concerns and issues of those interviewed;
- Interviewed 2 other State governments; and,
- Interviewed 3 private Montana enterprises.



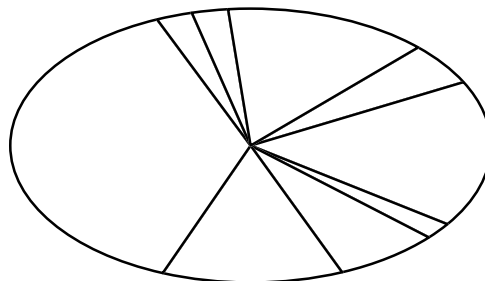
# Situation Assessment

## How Big is Purchasing?

**No. of Supply and Material Purchases**



**No. of Purchase Orders**



- 100,000 Supply and Material purchases and 15,500 purchase orders in the State.
- Studied agencies account for 50% of Supply and Material purchases, 65% of purchase orders, and 69% of the total State budget.
- Little consolidation in the purchasing of Materials and Supplies:
  - \*Large agencies average \$596 per Warrant
  - \*Small agencies average \$573 per Warrant
- 17 FTEs in studied agencies.
- Purchasing Bureau's portion totals \$112 million.

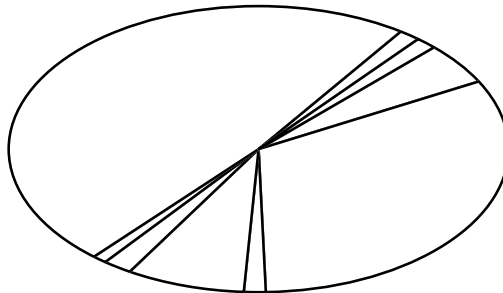
**Virtually every State employee is a customer of the purchasing process.**



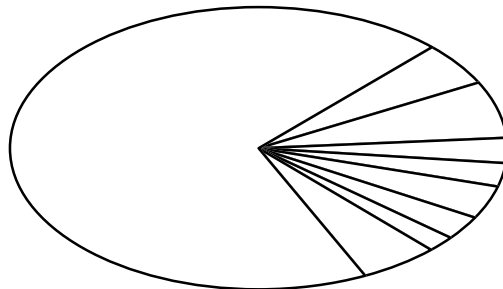
# Situation Assessment

## How Big is Accounts Payable?

Warrants by Agency



No Warrant Transfers by Agency



- 1.8 million Warrants and 31,244 No Warrant Transfers.
- Studied agencies account for 56% of all Warrants and 64% of No Warrant Transfers.
- Most Supply and Material warrants are issued for small amounts:
  - \* 98% of all Warrants for Supply and Materials are for less than \$5,000
  - \* 47% of the total dollars is for purchases less than \$5,000 (Purchasing Bureau Study)
- 25 FTEs in studied agencies.

**Although the actual creation of a warrant is centralized, much of the checking and reconciling of invoices occurs in a decentralized fashion.**



# Situation Assessment

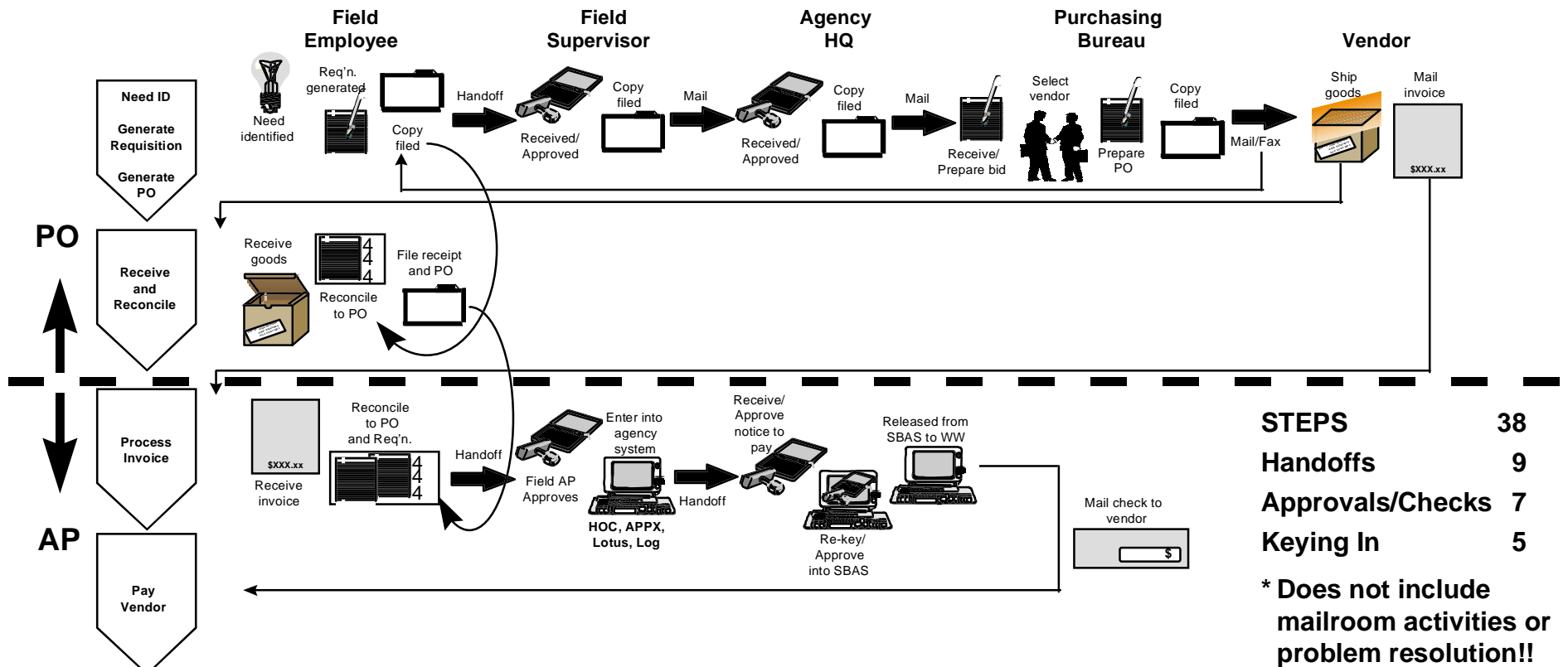
## Current Innovative Practices at the State



Procurement Cards	Eliminate the use of petty cash, purchase orders, department checks and warrants for low dollar purchases.
Worldwide Web Site	Eliminate the manual production and mailing of bids, enable automated internal ordering, and allow vendors access to State purchasing information.
Procurement Reforms	Allow the State more flexibility and greater choices in how it undertakes procurement activities. Provides greater latitude for departments or agencies to manage vendor relationships and acquire goods and services.
Purchasing Users Group	An organization within the State that keeps purchasing personnel updated on State initiatives and purchasing practices through meetings and a publication.
Cooperative Purchasing	The State reduces cost on purchases where it facilitates the acquisition of common goods for several agencies or external parties.
Flexible Purchasing Limits	The delegation of appropriate purchase limits by agency matches the agencies' resource capability in purchasing with their need to purchase goods and services.
Standalone Systems	Allows some agencies to track information to meet their requirements that otherwise could not be reasonably met with the State's core systems.
Barcoding	Several agencies are investigating the acquisition of barcoding technology to enhance their capability to manage fixed assets and inventories.
Limited PO Entry	Limited entry of purchase orders is being carried out in the State and reduces the amount of re-keying, enabling more efficient reconciliation.

# Situation Assessment

## Current Purchase and Accounts Payable Process\*

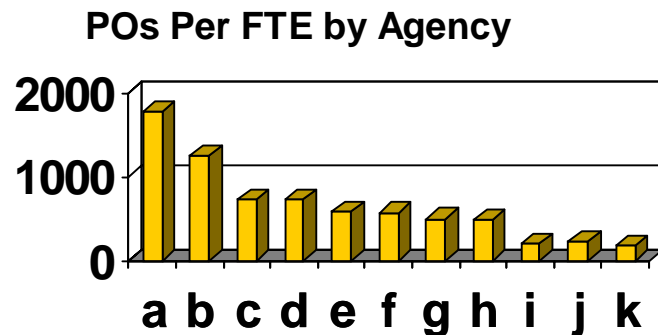
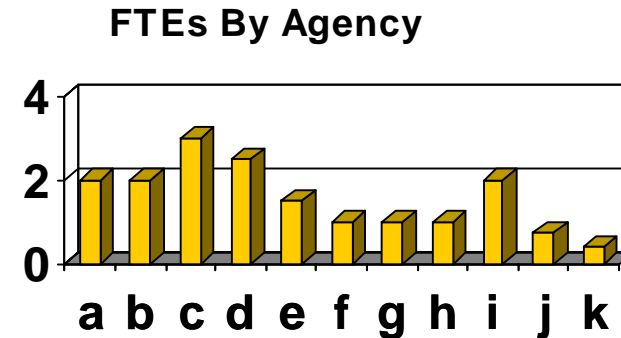


The paper based process is comprised of many non value-added activities, including 9 handoffs, 5 re-keying or entry, 5 mailings and 7 approvals/reviews.



# Situation Assessment

## Purchase Order Performance Indicators



- Average purchase orders per FTE = 763
- The findings are complicated by several factors such as the dollar value of the purchase order, complexity of the purchase and the agency purchase order limit.
- FTE numbers are conservative, as they do not include all FTEs involved in purchasing, and tend to focus on agency headquarters.

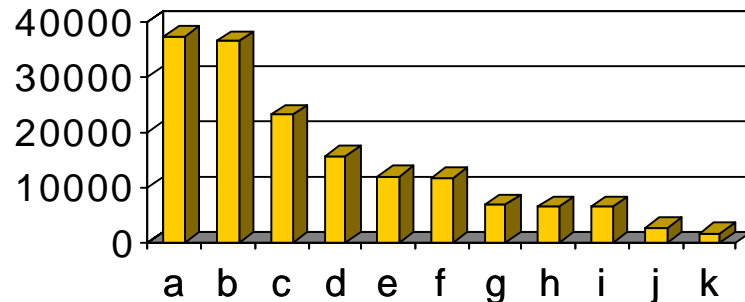
**Agencies with larger volumes of purchase orders are more efficient.**



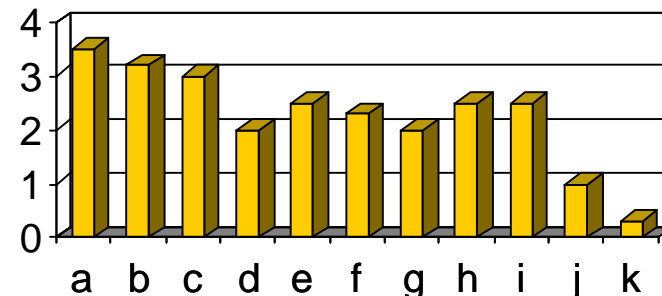
# Situation Assessment

## Accounts Payable Performance Indicators

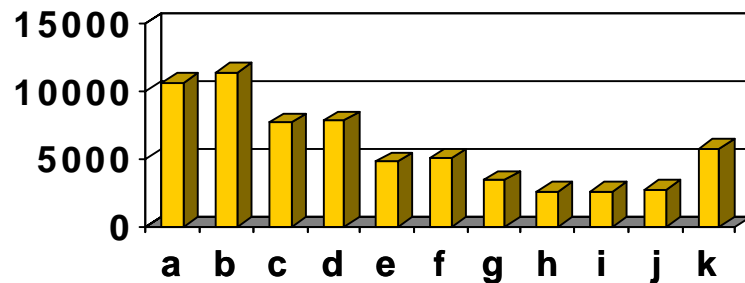
**Transactions By Agency**



**FTEs By Agency**



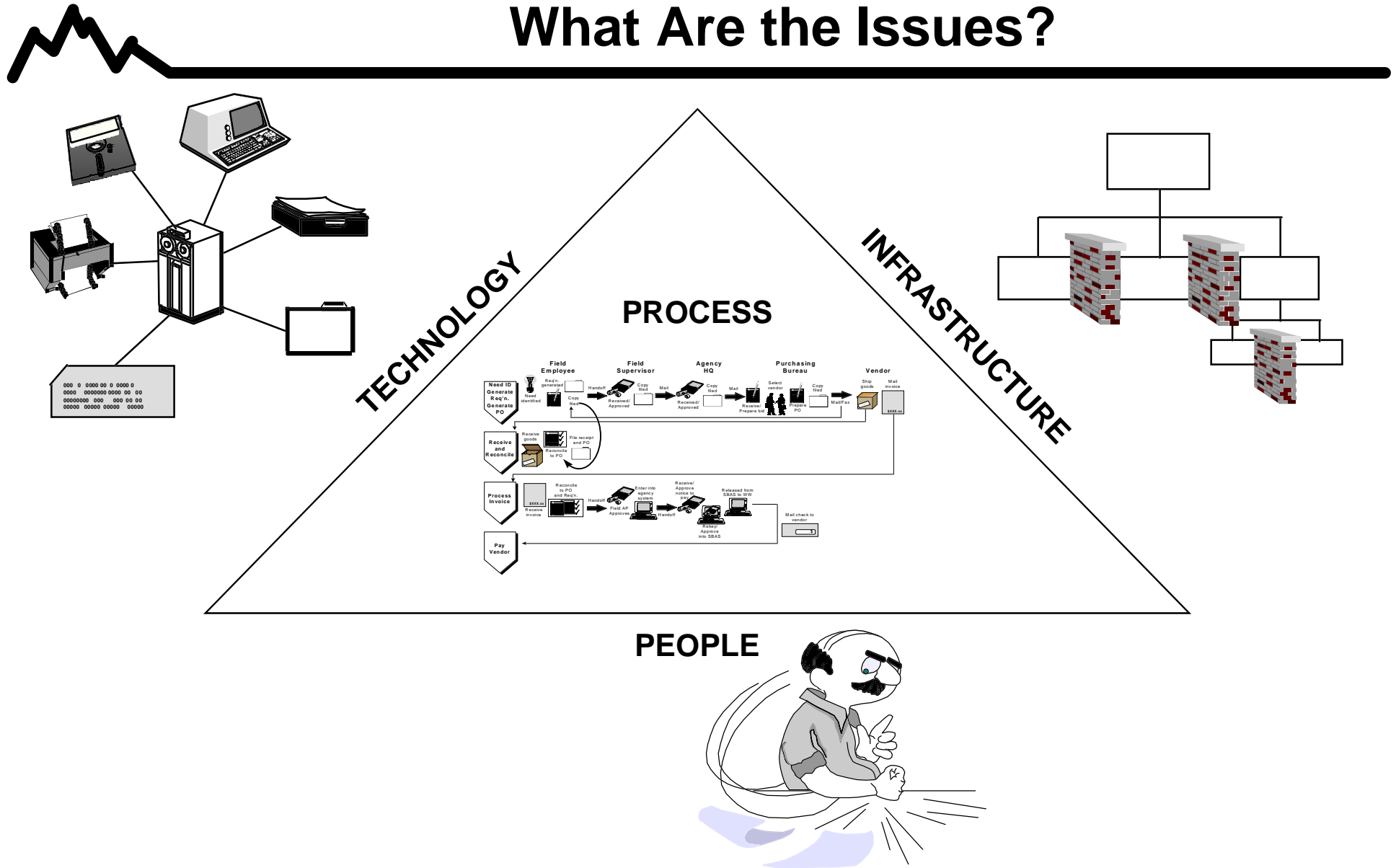
**Transactions Per FTE by Agency**



- Average number of transactions per FTE = 6476
- Agencies with large volumes are more efficient.
- Excluded activities include mailroom, paper flow between Purchasing and Accounts Payable, and problem resolution.

**Volumes tend to drive efficiency in transaction based processes such as Accounts Payable processing.**

# What Are the Issues?





## What Are the Process Issues?

### Duplication/Rework

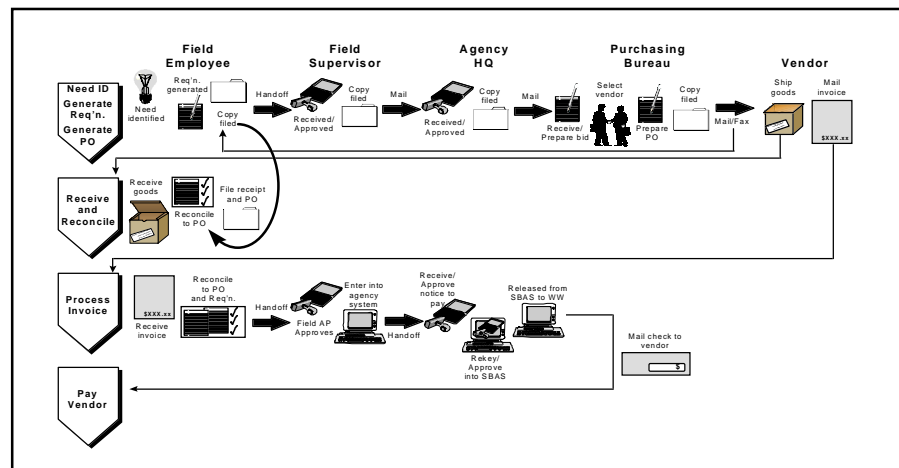
- Significant duplication of effort in manually integrating the Purchasing Process and the Accounts Payable Process.
- Significant time and effort is spent re-keying information from agency systems to the State's core systems.
- POs often created manually, entered into a system, then printed and executed as paper purchase orders.

### Handoffs

- Eight to ten handoffs were identified throughout the typical purchase order process as a result of the State's historical commitment to the division of duties and control of resources.

### Approvals/Checking

- Typical purchase with a purchase order requires approximately seven approvals or reviews.
- Requisitions and/or purchase orders are often required for low-value purchases.





# What Are the Technology Issues?

## Fragmentation and Lack of System Integration

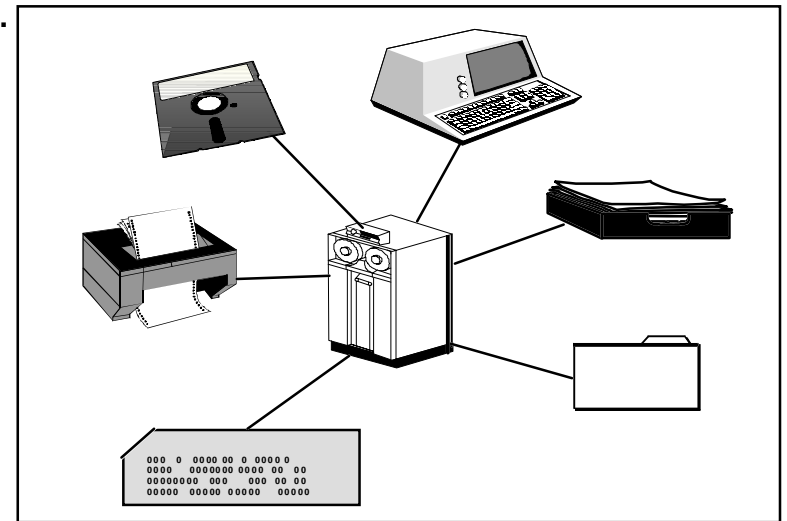
- Multiple systems that do not speak to each other result in redundant manual input.
- Lack of common systems eliminates opportunity for integration.

## Sub-Optimal Use of Technology

- Paper often drives processing even when systems support available.
- Electronic funds transfers to vendors not fully utilized.
- Electronic Data Interchange not utilized.

## Inadequate Agency Systems

- Home-grown systems in many agencies provide weak support for management decision making, and may produce unreliable data.





# What Are the Infrastructure Issues?

## Integration

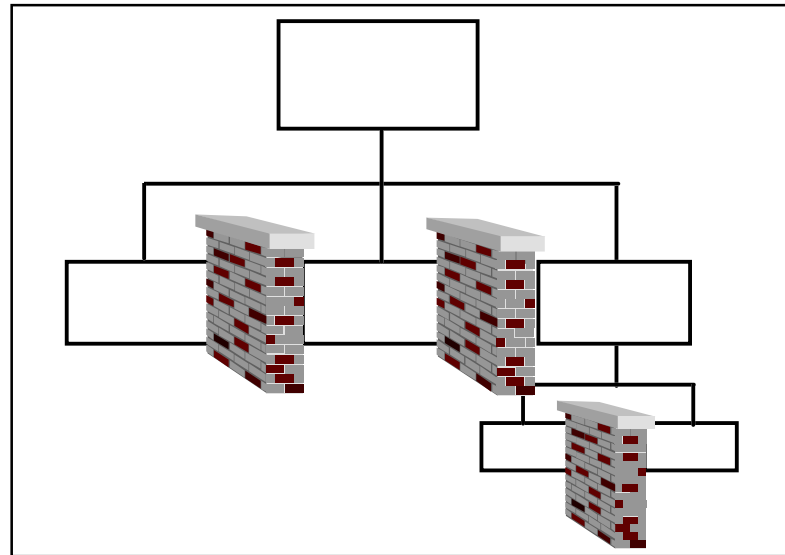
- State infrastructure is functionally oriented; agencies remain independent and utilize different processes; functions within agencies act autonomously.

## Inconsistency

- Policies and procedures not carried out consistently across the State. Different agency processes are used to acquire similar items.

## Forecasting

- Support for encumbrances and accruals is weak and time-consuming.





# What Are the People Issues?

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## **Frustration**

- Process, technology and infrastructure shortcomings create frustration.
- Frustration impacts on morale and effectiveness of State employees.

## **Lack of Training**

- Training is spotty at lower levels.
- Agency-specific processes preclude enterprise-wide training.

## **Limited Career Path**

- Perception of limited opportunities to progress in careers as purchasing or accounts payable professionals.
- Lack of consistency when an employee moves to a different agency and does not understand the new agency's system or processes.





# Findings of Public Sector Research

**Research at the States of Oregon and Utah highlighted a number of areas of potential interest to the State of Montana (see appendix). Some of the more important findings are summarized below:**

- Enterprise-wide systems enable the integration of all processes, including Purchasing and Accounts Payable across the State.
- Electronic purchase orders, receipts and invoices greatly reduce manual handling and reconciliation time.
- Online purchase orders decrease accounts payable processing time.
- Electronic bidding systems reduce the cost of manual preparation, mailing and advertising.
- Only purchases greater than \$50,000 go to Central Purchasing for formal bid.
- Agencies generate and approve the online purchase order so Accounts Payable focuses on paying, not reconciling.



# Findings of Private Sector Research

## **Interviews with Montana Power, Washington Corporation and Montana Rail Link revealed the following:**

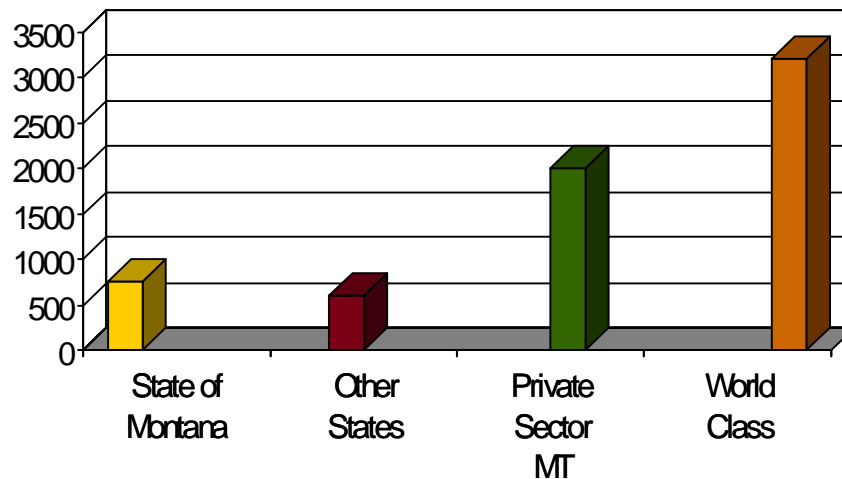
- All private sector benchmarked enterprises have implemented enterprise-wide financial information systems.
- The primary benefits of these systems are the integration of widely dispersed operations and the ability to electronically reconcile or match purchasing information with accounts payable information.
- While purchasing has remained decentralized, accounts payable activities are largely centralized and automated.
- Integration of asset management information with purchasing allows for better control and monitoring of inventories and fixed assets.



# Benchmark Findings

## Purchasing

### POs Per FTE



- State of Utah processes invoices of \$25,000 value or greater in its Central Purchasing.
- Private sector Montana companies are a better benchmark because they handle low dollar value purchase orders and their offices are widely dispersed throughout the State.

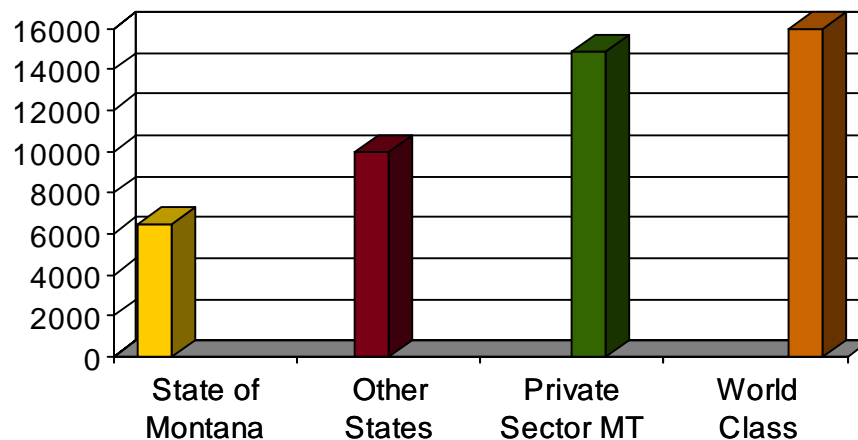
**Private sector benchmark companies are vastly superior in efficiency as a result of enterprise-wide technology, integration, and refined processes.**



# Benchmark Findings

## Accounts Payable

**Transactions Per FTE**

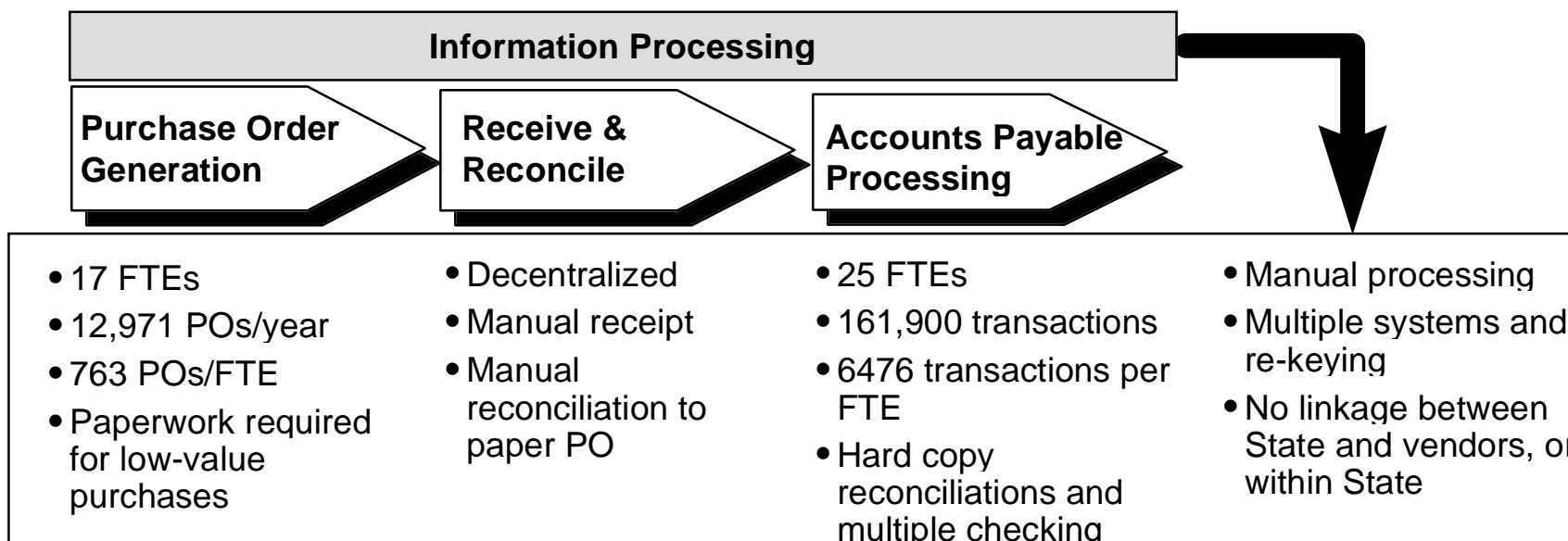


- Comparable states have almost twice the efficiency.
- Benchmark enterprises have eliminated non value-added activities and integrated enabling technologies.
- Accounts Payable tends to be largely automated with electronic integration with vendors.
- State of Montana spends much effort reconciling purchase orders to invoices and agency systems to core State systems.

**In Accounts Payable, where efficiencies are driven by automation, centralization and economies of scale, the benchmark enterprises are well ahead of the State of Montana.**



## Process Characteristics



### **BEST PRACTICES (Private Sector Montana Enterprises)**

<ul style="list-style-type: none"> <li>• 7 FTEs</li> <li>• 8,500 POs/year</li> <li>• 1,214 POs/FTE</li> <li>• Online PO generation</li> </ul>	<ul style="list-style-type: none"> <li>• Highly automated</li> <li>• Online receiving and reconciliation</li> <li>• Integrated with Purchasing and Accounts Payable</li> </ul>	<ul style="list-style-type: none"> <li>• 4.3 FTEs</li> <li>• 60,600 transactions per year</li> <li>• 14,000 transactions per FTE</li> <li>• Automated matching</li> <li>• Centralized processing</li> <li>• Single system processing</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise-wide system</li> <li>• Electronic funds transfer</li> <li>• One time keying</li> </ul>
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## Opportunity Analysis - Purchasing

<b>Purchase Orders Per FTE</b>		
Private Sector Montana	1,800	
State of Montana	800	= 2.25 times greater efficiency
<b>Total FTEs</b>		
Study Agencies	17	(66% of POs)
State of Montana	26	(Estimated 100% of POs)
<b>No. of FTEs Required at Benchmark Efficiency</b>	12	(26 FTEs divided by 2.25)
<b>State Efficiency Gain Opportunity</b>	14	(26 FTEs minus 12 FTEs)
<b>Total Potential Savings</b>	\$448,000	(14 FTEs times \$32,000)

Benchmark Potential-- Private Sector	World Class Performance
14 FTEs \$448,000	19 FTEs \$608,000

**The State has a significant opportunity to reduce cost through the improvement of processes, the integration of enterprise-wide applications, and innovative practices. This represents P.O.s only; similar gains are likely throughout other purchasing activities.**



# Opportunity Analysis--Accounts Payable

<b>Transactions Per FTE</b>		
State of Montana	14,000	
Private Sector Montana	6,500	= 2.15 times greater efficiency
<b>Total FTEs</b>		
Study Agencies	25	(55% of POs)
State of Montana	46	(Estimated 100% of transactions)
<b>No. of FTEs Required at Benchmark Efficiency</b>	21	(46 FTEs divided by 2.15)
<b>State Efficiency Gain Opportunity</b>	25	(46 FTEs minus 21 FTEs)
<b>Total Potential Savings</b>	\$800,000	(25 FTEs times \$32,000)

<b>Benchmark Potential-- Private Sector</b>	<b>World Class Performance</b>
<b>25 FTEs \$800,000</b>	<b>27 FTEs \$864,000</b>

**The State has a significant opportunity to reduce cost through the improvement of processes, the integration of enterprise-wide applications, and innovative practices.**



# Conclusions

**If the State of Montana were to redesign its Purchasing and Accounts Payable Processes, implement an integrated enterprise-wide information systems and utilize innovative Purchasing and Accounts Payable practices, there would be many benefits:**

- **Cost Reductions Over Payback Period**

	<b>Benchmark Potential 10-Year Savings</b>	<b>World Class Performance 10-Year Savings</b>
<b>Purchasing</b>	<b>\$4,480,000 (No interest)</b>	<b>\$6,080,000</b>
<b>Accounts Payable</b>	<b>\$8,000,000 (No interest)</b>	<b>\$8,640,000</b>
<b>TOTAL</b>	<b>\$12,480,000</b>	<b>\$14,720,000</b>

\*Potential operational savings not included.

- **Quality Improvement**

As non value-added activities (such as handoffs, manual preparation, re-keying and rechecking) are reduced, State employees will have more time for value-added activities (such as analysis and continuous improvement).

- **Integration**

As Purchasing and Accounts Payable processes are integrated and automated, errors will be reduced, cycle time will improve, and employees will have a wider appreciation of the processes.

**There is a significant imperative for change...both quantitative and qualitative.**



# **CHANGE IMPERATIVE**

## **Purchase to Payment Process**

### **Vision *Appendix***

**Public and Private Sector Research**



# Findings of Public Sector Research

## STATE OF OREGON

Purchase Orders/FTE	600 (\$16 million/FTE)
Invoices/FTE	n/a
Systems	ADTICS (Peat Marwick)-- Statewide Financial System

The State of Oregon utilizes a Statewide financial system that integrates the financial information of its agencies. The Vendor Information Program allows vendors to access State bid information through the World Wide Web. This reduces the cost to the State for manually processing bids by approximately \$700,000 per year (labor and postage).



# Findings of Public Sector Research

## STATE OF UTAH

Purchase Orders/FTE	300 (\$40million/FTE)
Invoices/FTE	10,000
Systems	AMS Inc, GFS, "FINET"

The State of Utah utilizes an "extended" purchasing system whereby purchase orders are entered into the system in the field. Electronic data transfer is used to "move" the purchase order around the State. Two or three way reconciliation enabled through automation of the financial systems. Accounts Payable is extremely efficient largely because of the online purchase order s and the ability of the Accounts Payable department to concentrate more time on processing transactions and less on manual reconciliation and filing.

Innovative practices include their Freight Management Program, Cooperative Purchasing Program, Electronic Purchase Orders, and Natural Gas Program.



# Findings of Private Sector Research

## MONTANA POWER

Purchase Orders/FTE	1,500
Invoices/FTE	n/a
Systems	Dun and Bradstreet

Montana Power uses an automated Purchasing and Accounts Payable system which provides automated purchase order/invoice matching. Requisition and purchase order information is entered online in the field. Automated processes transfer that information to their Central Purchasing office where the purchase order is issued and sent to the vendor. When the goods are received, the clerk enters that data online. When the invoice is received, Accounts Payable keys the invoice number, purchase order number and dollar amount. Transactions which match properly are paid automatically. Errors and non matched transactions are automatically routed to the applicable purchasing officer. Receipt of goods updates asset and inventory databases.



# Findings of Private Sector Research

## MONTANA RAIL LINK

Purchase Orders/FTE	2,520 P.O.s/FTE
Invoices/FTE	13,700 Invoices/FTE
Systems	J.D. Edwards Inc.

Montana Rail Link uses an online matching system for purchase orders. At purchase, the purchase order is generated online with cost, quantity, description, etc... Requisition is prepared in the field and sent to Central Purchasing where the purchase order is created and entered into the system. Distribution is handled electronically as is reconciliation when the invoice comes into Central Accounts Payable. Two-way (for inventory items) and three-way (for direct purchases) reconciliation is utilized.



# Findings of Private Sector Research

## WASHINGTON CORPORATION

Purchase Orders/FTE	n/a
Invoices/FTE	16,085
Systems	J.D. Edwards Inc.

Washington Corporation has implemented an enterprise-wide information system that enables it to efficiently process accounts payable. Through the automation of all purchasing information, reconciliation of invoices is processed electronically. The J.D. Edwards Inc. system also integrates the companies that operate under the Washington Corporation umbrella.